

S7 operation update

Eric Dufresne, TRR group meeting, Feb. 5, 2008

- Work on the new chemical exhaust system for hazardous gases is nearly completed. A new fan was installed and all the hutch access pipes and duck work is complete. See slide 4 for pictures.
- Dohn Arms also cleaned up the 7ID-B hutch control area this shutdown to improve the motor and cabling infrastructure. (slide 3)
- Don Walko has also reorganized some of the control racks near 7ID-C. (slide 3)
- ED and Harold Gibson took care of all recent safety issues found in recent walkthroughs by ES&H representatives.
- HG completed about 30 % of the S7 electrical inspection for our existing electronic equipment.
- The start up of the run was delayed by 2 days. Last Tuesday, we found a small water leak on the cooling water of the monochromator. To prevent a catastrophic failure, DW coordinated the repair with APS/MOM. He had to vent the monochromator. The 1st crystal is slightly darkened by deposits but the flux is consistent with measurements made a year ago. (slide 5)
- The 7ID PSS system was revalidated in the January shutdown. All the hutches also passed their radiation surveys after the installation of the exhaust system.
- BA opened up the streak camera and made drawings of the camera. He has ordered 2 MCPs, and new CsI photocathodes in preparation for the next streak camera run.
- We will upgrade our laser oscillator this month with a system capable of locking the laser to an external RF source with a 250 fs jitter. The laser program was reduced this run to accommodate the laser installation.
- An optical engineer from LCLS, Sasha Gilevich, and EL are designing a new laser beam delivery system for 7ID users. Design work is nearly complete.
- EL is also designing a new laser transport system to deliver laser beam from 7ID-E to 7ID-C while being able to access 7ID-D when X-rays are present in 7ID-C only.

S7 R&D (cont.)

- A new paper was recently published in Phys. Rev. Lett. by the group of Prof. Paul Evans entitled: [Nonlinear piezoelectricity in epitaxial ferroelectrics at high electric fields](#) See Alexei Grigoriev, Rebecca Sichel, Ho Nyung Lee, Eric C. Landahl, Bernhard Adams, Eric M. Dufresne, and Paul G. Evans, Phys. Rev. Lett. **100** 027604 (2008).
- On February 15, 2008, Jin Wang and Ali Nassiri are organizing a workshop on the Picosecond source.

Random pictures from XOR7



Reorganization of the 7ID-B
Control area



Change to 7ID-C motion control rack
(VME moved to a new rack).

New Chemical Exhaust



Water lines repaired on mono

